

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 8

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte JUDITH M. VINCENT,
YIHAN LIU, and
DONALD T. LILES

Appeal No. 2002-0519
Application No. 09/668,959

ON BRIEF

Before WINTERS, WILLIAM F. SMITH, and SCHEINER, Administrative Patent Judges.
WINTERS, Administrative Patent Judge.

DECISION ON APPEAL

This appeal was taken from the examiner's decision rejecting claims 1 through 23, which are all the claims pending in the application.

The Invention

In the background section of their specification, applicants state that emulsions prepared with conventional organic surfactants are generally not stable in the presence of an alcohol or a solvent. Further, when an ionic surfactant is used, the emulsions are not stable in the presence of salts. In fact, salts, lower alkyl alcohols, and certain

organic solvents are routinely used to break emulsions into separate phases to analyze content (specification, page 2, first paragraph).

Applicants' invention is based on the finding that when silicone polyethers are used to prepare organic oil-in-water (O/W) emulsions, the resulting formulations are stable in the presence of salts such as calcium chloride and aluminum sulfate; alcohols such as methanol, ethanol, propanol, and isopropanol; and organic solvents such as pentane (specification, page 4, third paragraph). According to applicants, when a silicone polyether is used to make an organic O/W emulsion, or a silicone polyether is added to a previously prepared organic O/W emulsion, the emulsion is stable in the presence of a salt, an alcohol, an organic solvent, or a combination thereof. Such stability is an advantage and benefit in personal care, household care, automotive care, and coating industry applications (specification, page 2, second paragraph).

Claims 1, 5, 9, 13, 19, and 21, which are illustrative of the subject matter on appeal, read as follows:

1. A composition comprising (i) 1-30 percent by weight of a salt component, and (ii) 70-99 percent by weight of an organic oil-in-water emulsion; the organic oil-in-water emulsion comprising 5-80 percent by weight of a non-silicon atom containing organic oil, 0.1-20 percent by weight of a silicone polyether surfactant, and 20-90 percent by weight of water.

5. A composition comprising (i) 1-80 percent by weight of an alcohol component, and (ii) 20-99 percent by weight of an organic oil-in-water emulsion; the organic oil-in-water emulsion comprising 5-80 percent by weight of a non-silicon atom containing organic oil, 0.1-20 percent by weight of a silicone polyether surfactant, and 20-90 percent by weight of water.

9. A composition comprising (i) 1-99 percent by weight of a solvent component, and (ii) 1-99 percent by weight of an organic oil-in-water emulsion; the organic oil-in-water emulsion comprising 5-80 percent by weight of a non-silicon atom containing

organic oil, 0.1-20 percent by weight of a silicone polyether surfactant, and 20-90 percent by weight of water.

13. A composition comprising (i) 1-30 percent by weight of a salt component, (ii) 10-80 percent by weight of an alcohol component, (iii) 1-80 percent by weight of a solvent component, and (iv) 10-90 percent by weight of an organic oil-in-water emulsion; the organic oil-in-water emulsion comprising 5-80 percent by weight of a non-silicon atom containing organic oil, 0.1-20 percent by weight of a silicone polyether surfactant, and 20-90 percent by weight of water.

19. A method of making an organic oil-in-water emulsion comprising (i) preparing an aqueous phase containing water, a silicone polyether surfactant, and optionally one or more organic surfactants; (ii) preparing an oil phase comprising a non-silicon atom containing unsaturated organic monomer; (iii) combining the aqueous phase and the oil phase; (iv) adding a polymerization catalyst to the combined phase; (v) agitating the combined phase for a time sufficient to allow the non-silicon atom containing unsaturated organic monomer to polymerize; and (vi) recovering an organic oil-in-water emulsion containing an organic polymer in the oil phase of the organic oil-in-water emulsion.

21. An organic oil-in-water emulsion prepared by the method according to claim 19.

The References

The prior art references relied on by the examiner are:

Gregoire et al. (Gregoire)	5,449,510	Sep. 12, 1995
Fecht et al. (Fecht)	5,969,038	Oct. 19, 1999
Lin et al. (Lin)	6,080,394	Jun. 17, 2000

The Rejection

All of the appealed claims stand rejected under 35 U.S.C. § 103(a) as unpatentable "over Lin et al. (6,080,394) in view of Gregoire et al. (5,449,510) and Fecht et al. (5,969,038)" (Examiner's Answer, page 3).

Deliberations

Our deliberations in this matter have included evaluation and review of the following materials: (1) the instant specification, including all of the claims on appeal; (2) applicants' Appeal Brief (Paper No. 6); (3) the Examiner's Answer (Paper No. 7); and (4) the above-cited prior art references.

On consideration of the record, including the above-listed materials, we reverse the examiner's rejection of claims 1 through 23 under 35 U.S.C. § 103(a).

Discussion

In rejecting claims 1 through 23 for obviousness over the combined disclosures of Lin, Gregoire, and Fecht, the examiner describes pertinent portions of each reference and concludes

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of making an emulsion of Lin et al. by adding the silicone polyether surfactant to the aqueous phase as taught by Gregoire et al. and by adding a polymerization catalyst to the combined phases as taught by Fecht et al., because of the expectation of producing oil-in-water emulsions that may be used as carriers in personal care products, as taught by Lin et al.,

Gregoire et al., and Fecht et al., and because of the expectation of achieving increased polymerization that results in a more viscous,

thickened oil-in-water emulsion.. [Paper No. 7, page 4, last paragraph].

We are at a loss to understand how the examiner proposes modifying the subject matter of Lin, per the teachings of Gregoire and Fecht, to arrive at any individual claim on appeal. Rather, the rejection appears to constitute a "shotgun" application of the prior art.

For example, in identifying differences between the claimed invention and Lin, the examiner states that "[t]he reference [Lin] fails to teach . . . adding the silicone polyether to the aqueous phase" (Paper No. 7, page 3, second paragraph). But this makes little sense when we consider composition claim 1, which does not recite adding silicone polyether to the aqueous phase. By the same token, the examiner states that "[t]he reference [Lin] fails to teach . . . adding a polymerization catalyst" (id.). Again, this bears little relationship to composition claim 1 which does not recite adding a polymerization catalyst.

In focusing on Lin's failure to teach "adding the silicone polyether to the aqueous phase" or "adding a polymerization catalyst," it may be that the examiner has claim 19 in mind. The record is unclear on this point, but we note that claim 19 recites, inter alia,

- (i) preparing an aqueous phase containing water, a silicone polyether surfactant, and optionally one or more organic surfactants;
- (ii) preparing an oil phase comprising a non-silicon atom containing unsaturated organic monomer;
- (iii) combining the aqueous phase and the oil phase;
- (iv) adding a polymerization catalyst to the combined phase

Assuming arguendo that the examiner has claim 19 in mind, nevertheless, we find that the examiner has not adequately explained why it would have been obvious to

transform Lin's method into a method of making an O/W emulsion using the specific series of steps recited in claim 19.

According to the examiner, Lin fails to teach adding silicone polyether to the aqueous phase (Paper No. 7, page 3, second paragraph). This is an apparent reference to the "water phase (W)" identified as Part B of Example 2 of Lin (column 5, lines 32-39). The examiner concludes that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Lin's method by adding the silicone polyether surfactant to the aqueous phase, per the teachings of Gregoire at column 3, lines 12 through 15. On this record, however, there is no apparent reason for doing so. The examiner has not adequately explained why it would have been obvious to add silicone polyether specifically to water phase (W) identified as Part B of Example 2 of Lin. Furthermore, even if that proposed modification of Lin's method were made, per the teachings of Gregoire, the examiner has not explained how the modification would result in the invention defined in any individual claim on appeal.

For these reasons, the examiner's rejection of claims 1 through 23 under 35 U.S.C. § 103(a) as unpatentable "over Lin et al. (6,080,394) in view of Gregoire et al. (5,449,510) and Fecht et al. (5,969,038)" is reversed.

Other Issue

In view of the "shotgun" nature of the examiner's rejection under 35 U.S.C. § 103(a), we express concern that the examiner may have overlooked the breadth of

claims 19-23 which do not call for a salt, alcohol, solvent, or mixture thereof. On return of this application to the examining corps, the examiner should ensure that the patentability of these claims has been adequately explored.

The examiner's decision is reversed.

REVERSED

Sherman D. Winters)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
William F. Smith)	
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